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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,953	09/23/2003	Yuichi Tamaoki	100529	4756

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EXAMINER	
BEISNER, WILLIAM H	

ART UNIT	PAPER NUMBER
1797	

NOTIFICATION DATE	DELIVERY MODE
05/13/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentmail@whda.com

Office Action Summary	Application No.	Applicant(s)	
	10/669,953	TAMAOKI ET AL.	
	Examiner	Art Unit	
	WILLIAM H. BEISNER	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 January 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 2 and 6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

3. Claims 1, 2 and 6 as amended include the newly recited claim limitation that each of the separate incubation spaces within the incubator housing includes a door for opening and closing entry into each of the incubation spaces. However, the originally filed specification, drawings and claims fails to provide support for this newly recited claim limitation. As discussed in the objection to the specification above, the originally filed disclosure only provides support for a single door that blocks the opening of the incubator housing wherein the opening includes the two separate incubation spaces. As a result, this new claim limitation was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1, 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swan et al.(US 5,090,617) as evidenced by Phillips et al.(IEEE Transactions) or Wheeler et al.(IEEE) and taken further in view of Kobayashi et al.(JP 63-108262) alone or alternatively further in view

of Dutton et al.(US 4,701,415) and taken further in view of Cremonese (US 4,839,292); Stout (US 3,4645,388) and Fazler et al.(DE 10017192).

The reference of Swan et al. discloses, a CO2 incubator (10) for incubating a culture medium accommodated in an incubation space (36) defined in a storeroom, the CO2 incubator comprising: CO2 gas concentration detection means (52, 102) for detecting a CO2 concentration in the incubation space, CO2 gas concentration setting means (82) for setting a desired CO2 gas concentration to be present in the incubation space, CO2 gas supply means (50) for supplying a CO2 gas into the incubation space, and a control means (92) for controlling the CO2 gas supply means that executes an operation of proportion, proportion and integration, or proportion and integration and differentiation on the basis of a deviation between the CO2 gas concentration in the incubation space as detected by said CO2 gas concentration detection means and the set CO2 gas concentration value set by said CO2 gas concentration setting means to calculate a CO2 gas supply time per unit time to the incubation space and a stop time, and to supply CO2 gas to the incubation space from the CO2 gas supply means in accordance with the calculated supply time and stop time (See PID controller discussed at column 1, lines 53-60; column 6, line 44, to column 7, line 50; and column 14, lines 49-68).

With respect to the claimed PID control, the references of Phillips et al. and Wheeler et al. are cited to evidence the level of skill in the art with respect to PID process control and to establish that the output of a PID controller inherently adjusts or calculates the "gas supply time per unit time" as is required in the instant claims.

Claim 1 differs by reciting that the incubator includes an air agitating blower and an air sampling loop communicated with the incubation space that includes the carbon dioxide gas concentration detection means and a pump for flowing gas through the sampling loop.

The reference of Kobayashi et al. discloses that it is conventional in the art to provide an incubation space (19) with an air-agitating blower (15) and an air sampling tube (31) and an air return tube (33) that includes carbon dioxide sensor (29).

In view of this teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the incubator device of the primary reference with an air sampling and agitating devices disclosed by the reference of Kobayashi et al. for the known and expected result of providing alternative means recognized in the art for sampling and mixing the air within an incubator space. If the measurement device (29) of Kobayashi et al. does not inherently include a pump for moving the air through the loop, the reference of Dutton et al. is cited as prior art which teaches that it is known in the art to provide the sampling loop of an incubator with a pump (39) (See Figure 6) for flowing the air through the loop components. In view of this teaching, it would have been obvious to one of ordinary skill in the art to provide the sampling loop of the modified primary reference with a pump for the known and expected result of ensuring the flow of air through the sampling loop of the device.

Claims 1 and 6 differ by reciting that the incubator includes a plurality of incubation spaces which can be independently controlled by the controller.

The reference of Cremonese discloses that it is known in the incubator art to provide an incubator (282) with a plurality of incubation compartments (287).

The reference of Stout discloses that it is conventional in the art to independently control the conditions in a plurality of incubation devices (See Figure 2). The device employs a plurality of valves to control the independent flow of gas to the different chambers.

In view of these teachings, it would have been obvious to one of ordinary skill in the art to provide the incubator devices of the primary references with individual compartments for the known and expected result of allowing the temperature of each compartment to be maintained separately with respect to another compartment. Modification of the device of the primary reference to separately control the conditions in each compartment would have been well within the purview of one having ordinary skill in the art for the known and expected result of allowing independent control of each culture compartment. Note, that mere duplication of parts has no patentable significance unless a new and unexpected result is produced (In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960)).

While the reference of Cremonese discloses the use of a single door (283) for closing the openings of the incubation spaces (287), Claims 1 and 6 further differ by reciting that each of the incubation spaces has its own door.

The reference of Fazler et al. discloses an incubator (1) that includes a plurality of incubation spaces wherein each incubation space includes its own door (10) (See Figure 1a). The incubator also includes outer doors (3,4) which close all of the openings in a manner similar to the door (283) of Cremonese.

In view of this teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the separate openings of the modified primary reference with individual doors as suggested by the reference of Fazler et al. for the known and

expected result of protecting the contents of the spaces from the outside environment when accessing one of the spaces.

With respect to claim 2, the CO2 sensor (102) is an infrared sensor.

8. Claims 1, 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vision Scientific (CO2 Incubator Model VS-9108MS) as evidenced by Phillips et al. (IEEE Transactions) or Wheeler et al.(IEEE) and taken further in view of Kobayashi et al.(JP 63-108262) alone or alternatively further in view of Dutton et al.(US 4,701,415) and taken further in view of Cremonese (US 4,839,292); Stout (US 3,4645,388) and Fazler et al.(DE 10017192).

The reference of Vision Scientific discloses, a CO2 incubator for incubating a culture medium accommodated in an incubation space defined in a storeroom, the CO2 incubator comprising: CO2 gas concentration detection means for detecting a CO2 concentration in the incubation space, CO2 gas concentration setting means for setting a desired CO2 gas concentration to be present in the incubation space, CO2 gas supply means for supplying a CO2 gas into the incubation space, and a control means for controlling the CO2 gas supply means that executes an operation of proportion, proportion and integration, or proportion and integration and differentiation on the basis of a deviation between the CO2 gas concentration in the incubation space as detected by said CO2 gas concentration detection means and the set CO2 gas concentration value set by said CO2 gas concentration setting means to calculate a CO2 gas supply time per unit time to the incubation space and a stop time, and to supply CO2 gas to the incubation space from the CO2 gas supply means in accordance with the calculated supply time

and stop time (See entire product brochure, especially the PID controller and IR sensor discussed on page 2).

With respect to the claimed PID control, the references of Phillips et al. and Wheeler et al. are cited to evidence the level of skill in the art with respect to PID process control and to establish that the output of a PID controller inherently adjusts or calculates the "gas supply time per unit time" as is required in the instant claims.

Claim 1 differs by reciting that the incubator includes an air agitating blower and an air sampling loop communicated with the incubation space that includes the carbon dioxide gas concentration detection means and a pump for flowing gas through the sampling loop.

The reference of Kobayashi et al. discloses that it is conventional in the art to provide an incubation space (19) with an air-agitating blower (15) and an air sampling tube (31) and an air return tube (33) that includes carbon dioxide sensor (29).

In view of this teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the incubator device of the primary reference with an air sampling and agitating devices disclosed by the reference of Kobayashi et al. for the known and expected result of providing alternative means recognized in the art for sampling and mixing the air within an incubator space. If the measurement device (29) of Kobayashi et al. does not inherently include a pump for moving the air through the loop, the reference of Dutton et al. is cited as prior art which teaches that it is known in the art to provide the sampling loop of an incubator with a pump (39) (See Figure 6) for flowing the air through the loop components. In view of this teaching, it would have been obvious to one of ordinary skill in the art to provide the

sampling loop of the modified primary reference with a pump for the known and expected result of ensuring the flow of air through the sampling loop of the device.

Claims 1 and 6 differ by reciting that the incubator includes a plurality of incubation spaces which can be independently controlled by the controller.

The reference of Cremonese discloses that it is known in the incubator art to provide an incubator (282) with a plurality of incubation compartments (287).

The reference of Stout discloses that it is conventional in the art to independently control the conditions in a plurality of incubation devices (See Figure 2). The device employs a plurality of valves to control the independent flow of gas to the different chambers.

In view of these teachings, it would have been obvious to one of ordinary skill in the art to provide the incubator devices of the primary references with individual compartments for the known and expected result of allowing the temperature of each compartment to be maintained separately with respect to another compartment. Modification of the device of the primary reference to separately control the conditions in each compartment would have been well within the purview of one having ordinary skill in the art for the known and expected result of allowing independent control of each culture compartment. Note, that mere duplication of parts has no patentable significance unless a new and unexpected result is produced (In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960)).

While the reference of Cremonese discloses the use of a single door (283) for closing the openings of the incubation spaces (287), Claims 1 and 6 further differ by reciting that each of the incubation spaces has its own door.

The reference of Fazler et al. discloses an incubator (1) that includes a plurality of incubation spaces wherein each incubation space includes its own door (10) (See Figure 1a). The incubator also includes outer doors (3,4) which close all of the openings in a manner similar to the door (283) of Cremonese.

In view of this teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the separate openings of the modified primary reference with individual doors as suggested by the reference of Fazler et al. for the known and expected result of protecting the contents of the spaces from the outside environment when accessing one of the spaces.

With respect to claim 2, the CO2 sensor is an infrared sensor.

Response to Arguments

9. With respect to the rejection of Claims 1, 2, 4 and 5 under 35 U.S.C. 103(a) as being unpatentable over Swan et al.(US 5,090,617) as evidenced by Phillips et al.(IEEE Transactions) or Wheeler et al.(IEEE) and taken further in view of Kobayashi et al.(JP 63-108262) alone or alternatively further in view of Dutton et al.(US 4,701,415) and taken further in view of Cremonese (US 4,839,292); Stout (US 3,4645,388) and Fazler et al.(DE 10017192), Applicants argue that the rejection is improper because the reference of Swan and the cited secondary references do not describe all of the features of claim 1 with respect to the supply and stop time of carbon dioxide (See pages 7-8 of Applicants' response filed 1/27/2010).

In response, Applicants' comments are not found to be persuasive for the following reasons. First, the reference of Swan et al. discloses the use of PID control which includes

deviation between the detected concentration and set concentration (See column 13, line 61, to column 14, line 5); proportion operation calculates a control amount in proportion to the deviation for reducing deviation (See column 14, lines 11-16); integral operation calculates a control amount for reducing an integrated value of deviation (See column 14, lines 6-28); and differential operation calculates a control amount for reducing a differentiated value of the deviation (See column 14, lines 28-48). Additionally, one of ordinary skill in the art would recognized that use of the term PID control in combination with the carbon dioxide controller would inherently include the recited control steps. This is evidenced by the references of Swan et al., Phillips et al. and Wheeler et al.

10. With respect to the rejection of Claims 1, 2, 4 and 5 under 35 U.S.C. 103(a) as being unpatentable over Vision Scientific (CO2 Incubator Model VS-9108MS) as evidenced by Phillips et al. (IEEE Transactions) or Wheeler et al.(IEEE) and taken further in view of Kobayashi et al.(JP 63-108262) alone or alternatively further in view of Dutton et al.(US 4,701,415) and taken further in view of Cremonese (US 4,839,292); Stout (US 3,4645,388) and Fazler et al.(DE 10017192), Applicants argue that the rejection is improper because the reference of Vision Scientific and the cited secondary references do not appear to teach or suggest the features of claim 1 (See page 8 of Applicants' response filed 1/27/2010).

In response, Applicants' comments are not found to be persuasive for the following reasons. While the reference of Vision Scientific does not specifically expand on the PID control mentioned in the reference with respect to carbon dioxide control, one of ordinary skill in the art would clearly recognized that use of the term PID control in combination with the carbon

dioxide controller would inherently include the recited control steps. This is evidenced by the references of Swan et al., Phillips et al. and Wheeler et al.

11. With respect to new claim 6, Applicants argue that claim 6 defines over the prior art of record because it recites a plurality of spaces but does not recite a separate door for each space (See page 8 of the response filed 1/27/2010).

In response, while claim 6 does not recite a separate door for each space, claim 1 still recites "a respective door" for opening and closing entry into each of the incubation spaces. It is noted that the references of Cremonese, Stout and Fazler et al. have been cited to address the use of separate incubation spaces and doors for each space.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM H. BEISNER whose telephone number is (571)272-1269. The examiner can normally be reached on Tues. to Fri. and alt. Mon. from 6:15am to 3:45pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael A. Marcheschi, can be reached on 571-272-1374. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William H. Beisner/
Primary Examiner
Art Unit 1797

WHB